ABSTRACT

The present invention relates to a method of identifying a polypeptide using a class of novel, water-stable reagents. More specifically, the method according to the invention comprises the steps of

(a) derivatization in an aqueous solution of the N-terminus of the polypeptide, or the N-termini of one or more peptides of the polypeptide, with at least one acidic reagent which comprises a sulfonyl moiety coupled to an activated acid moiety to provide one or more peptide derivatives;

(b) analyzing at least one such derivative using a mass spectrometric technique to provide a fragmentation pattern; and

(c) interpreting the fragmentation pattern.

Furthermore, the present invention also relates to a kit for identifying a polypeptide by a mass spectrometric technique, which kit comprises at least one acidic reagent comprising a sulfonyl moiety coupled to an activated acid moiety in a container together with suitable means for analysis of the fragmentation pattern obtained.